200500263

No.

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Walter W. Robertson

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) MAY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

GAMAGRASS, EASTERN

'Dewald'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this eleventh day of August, in the year two thousand and eight.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
WALTER W. ROBERTSON

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
Dewald Eastern Gamagrass

3. VARIETY NAME
Dewald

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
3329 MILLERSTOWN ROAD
SHIPPENVILLE PA 16254 USA

5. TELEPHONE *(include area code)*
814 782-3456

6. FAX *(include area code)*
814 782-6468

FOR OFFICIAL USE ONLY

PVPO NUMBER
20050263

FILING DATE
May 23, 2005

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
N/A

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
N/A

9. DATE OF INCORPORATION
N/A

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
WALTER W. ROBERTSON
3329 MILLERSTOWN ROAD
SHIPPENVILLE PA 16254

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 3,652.00
DATE May 23, 2005

CERTIFICATION FEE:
$ 768.00
DATE 7-03-08

11. TELEPHONE *(Include area code)*
814 782-3456

12. FAX *(Include area code)*
814 782-6468

13. E-MAIL

14. CROP KIND *(Common Name)*
Eastern Gamagrass

15. GENUS AND SPECIES NAME OF CROP
Tripsacum dactyloides

16. FAMILY NAME *(Botanical)*
Graminea

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☑ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (*OPTIONAL*)
☐ YES ☒ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☐ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☐ Filing and Examination Fee ($3,652), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☒ YES *(If "yes", answer items 21 and 22 below)* ☐ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☒ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☒ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☒ NO 3-9-08 LMC per correspondence Oct 4, 2007
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
walter w Robertson			
NAME *(Please print or type)*		NAME *(Please print or type)*	
WALTER W. ROBERTSON			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
OWNER	5-16-2005		

(See reverse for instructions and information collection burden statement)

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A, B, C, E; (3) at least 2,500 viable untreated seeds, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in a public repository prior to issuance of a certificate; (4) check drawn on a U.S. bank for $2,450 ($300 filing fee and $2,150 examination fee), payable to "Treasurer of the United States" *(See Section 97.175 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 30 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Blvd., Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $300 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: (301) 504-5518

#200500263

ITEM

16a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;

(2) the details of subsequent stages of selection and multiplication;

(3) evidence of uniformity and stability; and

(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified.

16b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;

(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences;

(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

16c. Exhibit C forms are available from the PVPO for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

16d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

16e. Section 52(4) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employee of the breeder, the owner through purchase or inheritance, etc.

17. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant may NOT reverse this affirmative decision after the variety has been sold and so labelled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See P.L. 103-349 for additional information.)*

20. See Sections 41, 42, and 43 of the Act and Section 97.175 of the regulations for eligibility requirements.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center–East, Beltsville, MD 20705. Telephone: (301) 504-8089.

#200500263

DRAFT Exhibit A Form

1. Describe the genealogy (back to and including public and commercial varieties, lines, or clones used) and the breeding method(s).

Dewald Eastern Gamagrass is an apomictic tetraploid. The normal breeding was simply propogation over 6 yrs. of seed increase. There was no significant genetic variability. Dewald was observed for 8 generations and was determined to be genetically uniform and stable from generation to generation with no evidence of variants

2. Give the details of subsequent stages of selection and multiplication.

Year	Detail of Stage	Selection Criteria
1995	Mature plant from a native population	disease resistance gynomongesious upright growth habit
1996	Veg. propogation of original plant + seed collection	
1997	Veg prop. of 137 plants from original + seed collection. Seed from 1996 planted	
1998	Veg prop. 500 plants + seed collection	
1999	4 acres planted from seed collected in 98	
2000-2004	additional acres planted for seed increase	

3a. Is the variety uniform? X Yes ____ No

How did you test for uniformity? Visual observations. Seed head counts. Viable seed counts. Plant height, seed emergence dates. Uniformity was complete and consistent.

3b. Is the variety stable? X Yes ____ No

How did you test for stability? Over how many generations? Original plant tested for chromosome count. found to be an apomictic tetraploid

4. Are genetic variants observed or expected during reproduction and multiplication? ____ Yes X No

If yes, state how these variants may be identified, their type and frequency.

Continue on additional pages if necessary.

ORIGIN AND BREEDING HISTORY

A. Germplasm Source: Federal Highway Right-of-Way. Pulaski County Arkansas. Longitude 91* 41' and Latitude 34* 15'. A single plant removed for vegetative propagation.

Breeding Procedure: A single plant was discovered in July 1995. The entire plant was dug up and divided into 63 parts. These 63 plants were grown in a greenhouse until the following spring. In the spring of 1996 the plants were grown in a small plot in Arkansas close to where the plant was discovered. Seed was hand harvested. In the spring of 1997 the plants were dug up and divided into 137 separate plants. They were planted in a field in Central Oklahoma. Seed was hand harvested. The seed harvested in 1996 was stratified and planted resulting in approximately 400 additional plants. In the spring of 1998 all of the plants were dug up and transplanted into a foundation plant nursery. The 137 plants originating from the original plant were divided into approximately 500 plants. The 400 plants originating from seed were transplanted and used for a grazing trial. Seed was hand harvested. In April of 1999 four acres was planted using the seed that was hand harvested and cold stratified. The seed from this planting was harvested with a flail-vac type machine. In January of 2000 an additional three acres was planted in the same field. Again seed was harvested using the flail-vac machine. In December of 2001another 4 acres were planted in the same field. No viable seed was harvested in 2001 (an experiment was conducted were the plants were cut for hay in May; expecting to harvest a late crop of seed in July. This was a total failure). In 2002 an additional twenty acres was planted. Only four of the twenty acres had enough viable plants to save. On the eleven acres of mature plants the seed was harvested with an "A" Model Gleaner Combine. In December 2002, 90 pounds of pure live seed were provided to

Walt Robertson of ~~Shippensberg,~~ SHIPPENVILLE Pennsylvania for seed increase purposes. In 2003 the failed 16 acres was planted again as well as an additional 35 acres. All of the 51 acres was a failure. Wild Turkeys found the seed shortly after planting and predation of the seed was 100%. Now there was 15 acres of mature plants that was harvested with the Gleaner Combine. In 2003 the failed 51 acres was replanted; however the same thing occurred. There was nearly 100% predation by Wild Turkeys. In 2004 the 16 acres was again replanted. The 15 acres of mature plants was harvested with the Gleaner Combine. In August of 2004 an additional 305 pls was provided to Walt for seed increase. Later after harvest was completed a contract was drawn up allowing Walt to purchase the remaining 833 pls as well as complete and permanent rights to the germplasm.

#20050026 3

SUBJECT: Supplemental Information for Exhibit A

BACKGROUND: Eastern Gamagrass is characteristically a poor producer of viable seed. However, its potential as a forage grass and a source of ethanol through cellulosic process is significant. Agronomists have long searched for an ecotype that exhibits gynomonoecious characteristics that would alleviate the poor seeding characteristic. The germplasm that is now called "Dewald" Eastern Gamagrass was first observed in June of 1995 off a roadway in Arkansas amid a growing colony of gamagrass. As the growing season progressed, it became evident that the plant exhibited superior seed production characteristics. Subsequent tests confirmed that the plant was indeed an apomictic tetraploid.

SPRING OF 1996: Alternating rows of Eastern Gamagrass that were in the public domain were planted along with local diploid ecotypes and the collected gynomonoecious ecotype. This planting was to test for any possible cross-pollination. Seed was then collected from each ecotype.

SPRING OF 1997: Seeds from the 1996 collection were planted, and plants were observed as they matured. Cross-pollination had occurred between some ecotypes, but "Dewald" showed no evidence of change, thus supporting the assumption that it was an apomictic tetraploid.

In addition, another 1997 trial was conducted to observe resistance to disease and lodging. Two hundred (200) ecotypes from northern Oklahoma and southern Kansas were collected vegetatively and planted side by side with "Dewald". The plantings were designed to test for development of mosaic wheat rust and to compare lodging resistance. Many ecotypes displayed severe disease and/or lodging problems. However, "Dewald" exhibited resistance to both disease and lodging.

1997 THROUGH 2004: Efforts were directed toward seed increase and harvesting techniques. Fifteen (15) acres of mature plants were established for seed production.

#200500263

DRAFT Exhibit B Form

Based on overall morphology, Dewald (Applicant's new variety) is most similar to Texas Sue (Most similar comparison variety(ies))

Dewald (Applicant's new variety) most clearly differs from Texas Sue (Most similar comparison variety(ies)) in the following traits:

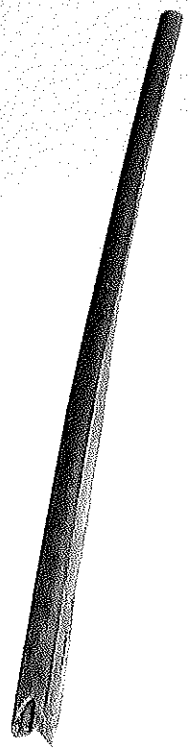
Name the specific trait, then list the value of that trait for each variety in the comparison. Attach appropriate supporting evidence (see the Guidelines for Presenting Evidence in Support of Variety Distinctness, available from the PVP Office or website).

Eg. Leaf Pubescence *Eg. Leaf Color* *Eg. Plant Height*	*heavy pubescence* *Dark Green (5GY 3/4)* *200 cm +/- 10 cm (N=25)*	*glabrous* *Light Green (2.5GY 8/10)* *250 cm +/- 15 cm (N=25)*	*photograph attached* *Munsell Color Chart* *statistics attached*
1. Qualitative traits:	Applicant's New Variety Dewald	1st Comparison Variety Texas Sue	Location of Evidence
Plant Height	2.54 meters	210 cm	Texas Sue App 4
Internode length	199 mm	170 mm	
2. Color traits:			
Leaf Color	Light Green 2.5GY 8/10	Dark Green 5GY 3/4	Photo attached
Seed Color	Choclate Brown 4.2Y	Light green 5Y 6/4	photo attached
3. Quantitative traits:			
ANTHOCYANIN Leaf Sheath	Pale Purple 5P 5/6 glaborus	Pale yellow 5GY 8/6 Scaberulous + Pubescent+	photo attached Texas Sue App +
4. Other:			
Seed weight	135g = 1000 Seed	72g = 1000 Seed	TEXAS Sue APP

Use additional tables to present clear differences for additional comparison varieties. Use additional pages to present supporting evidence.

+ There is no visual evidence that the reported leaf sheath characteristics for "Texas Sue" is Actually correct

Anthocyanin Comparison



Dewald

Texas Sue

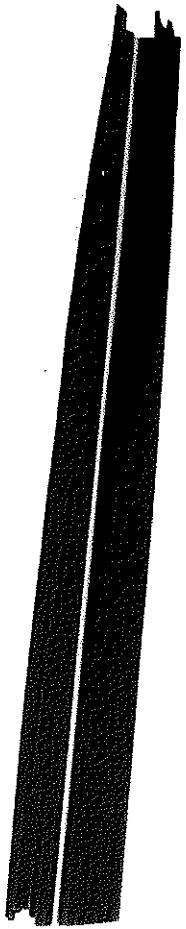
#200500263

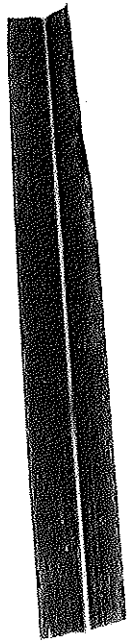
Seed Comparison

Dewald

Texas Sue

Leaf Blade Color Comparison





Dewald

Texas Sue

"rust"

#200500263

Second growing season of 'Dewald' from seed (July 1999)


#200500263
12
200500263
Original Plant

#200500263

#200500263

EXIBIT C

USE AND ADAPTATION

USE: ✓ Forage ____ Turf ____ Erosion Control ✓ Range

✓ Wildlife ✓ Other (Ornamentals and Biomass Energy Source)

AREA OF ADAPTATION Northeast, Southeast and Central United States

GROWTH HABIT: ____ Annual ____ Biennial ✓ Perennial

PLANT CHARACTERISTICS:

1) 2.54 ~~Cm~~ meters (Height from soil surface to top of seadhead
____ Cm ____ taller or ____ shorter than ____

2) 199 mm internode length average of six nodes

3) Growth Habit: ✓ Erect ____ Semi-erect ____ Prostrate

4) Culm:

50.5 cm excertion (Flag leaf to base of inflorescence)

Neck Shape: 100% Straight ____% Wavy

Pubescence at Nodes: ____ Present ✓ Absent

Node Color: ✓ % Green ____ % Purple ____% Other

Internode Anthocyanin: ✓ Present ____Absent

5) Rhizomes: ✓ Present ____ Absent

6) Reproduction: ___ Sexual ✓ Vegetative ✓ Apomictic ___ Other

7) Leaf Characteristics: (1st below flag)

Surface: ✓ Flat _____ Convolute

Color: ____Dark Green ✓ Medium Green ____Blue Green ____ Blue

_____ Other

Mean Width: 22,5 mm. 20 mm – 28 mm

Mean Length: 67,8 cm. 30 cm – 110 cm

Upper Surface: ____ Scabrous _____ Pubescent ✓ Glabrous

Lower Surface: ____ Scabrous _____ Pubescent ✓ Glabrous

Leaf Edge: _____ Toothed ✓ Smooth

8) Leaf Sheath:

Upper Sheath: ✓ Open _____ Overlapping

Surface: _____ Scabrous _____ Pubescent ✓ Glabrous

Keeled: ✓ Yes _____ No

Anthocyanin at Base: 100 % Present _____ % Absent

9) Ligule: absent

_____ % Pubescent _____ % Glabrous

_____ mm. Length

10) Auricle: N/A

_____ % Pubescent _____ % Glabrous

11)Inflorescence:

Type: ✓ Raceme _____ Spike _____ Other _____

Shape: ✓ Cylindrical _____ Conical _____ Clevate _____ Fusiform

_____ Other

Size: 5 mm. width at widest point

13.5 cm. length pistalate portion only

Orientation: ✓ Erect _____ Nodding

Fruiting Branches: _____ Appressed _____ Ascending _____ Spreading

12)Seed Characteristics: 5 mm width 8 mm length on terminal racemes (2 or three)

5 mm. width 10 mm. length (seeds from secondary single racemes

135 grams weight per 1000 seed

~~Lemma~~: Glume

4 mm. length 8 mm. width

Shape: _____ Lanceolate ✓ Ovate _____ Obavate _____ Elliptic _____ Oblong

Color: Light Chocolate Brown

Surface: ✓ Glossy _____ Dull

Texture ✓ Smooth _____ Punctate

Basal Hair: ✓ Absent _____ Present _____ Short _____ Long

Keel: _____ Toothed ✓ Smooth _____ Pubescent _____ Glabrous

Awns:

✓ Absent 100 %

_____ Present _____ %

_____ Geniculate _____ Straight

Insertion: _____ Basal _____ Middle ____ Distal

13)Variants (described and give rate of occurrence): _____

The ecotype is an apomictic tetraploid. Every generation of plants resulting from seed have been identical to the original plant. Due to this asexual characteristics any deviation in plant appearance will be due to environmental influence i.e. soil fertility, moisture availability,etc.
Note: In 2005 there was a single plant isolated that Appeared to have mutated. It has never produced any viable seed also not having viable pollen and has been destroyed.

3-09-08 LMC
Information transfer from revised ErhC from 10-4-2007

14) Breeder's Signature: Larry D. Tands

C. Objective description of variety:

This ecotype of Eastern Gamagrass is a gynomonoecious, apomictic tetraploid. Wherein most ecotypes of Gamagrass produce very few viable seed, this ecotype is a mutant that produces up to 1066 lbs. of live seed per acre (483 kg/hectare). Each seed stem has five leaf blades emerging from it. The terminal spike results in two or three racemes, with nine to twelve seed total. The seed on the terminal spikelets will be rounded on the outside part of the fruitcase and concaved on the inner. The caryopses are contained in a fruitcase composed of hardened segments of the rachis and lignified outer glumes. These spikelets emerge first having a staminate flowers held distally. The pistillate spikelets

emerge fully fertilized. If the seed contains an exposed pistil the seed will be unfertile. Seeds are produced apomictically. Secondary flowering culms emerge from each of the leaf blades along the seed stem. The uppermost leafblade will be the shortest but will produce a raceme first. These secondary spikes also contain staminate flowers and pistillate spikelets. The spikelets will be oval shaped. The position of the lignified outer glumes will be opposite; usually eleven to thirteen. Sometimes seven or nine (never an even number). As with the terminal racemes if the pistil is exposed the seed will be infertile. The lower four racemes will emerge soon after the first. If soil moisture levels remain adequate throughout the growing season a second set of racemes will emerge from the same leaf blades (This is the only known ecotype that can do this). Reproduction will continue from late June until a killing freeze in the fall. In 1998 new racemes were still emerging on December 10th. Most ecotypes never produce seed during the seedling year. It is even rare among tetraploids. This ecotype has been known to produce 80 to 90 spikes during the seedling year. However the percentage of infertile seeds from these seedlings is normally very high.

In situations were environmental conditions are uniform the botanical characteristics of this ecotype will be extremely uniform. Changes in fertility and moisture availability can cause changes in total plant height, distance between nodes, and total production of both biomass and seed quantity.

REPRODUCE LOCALLY. Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
WALTER W. ROBERTSON	DEWALD EASTERN GAMAGRASS	Dewald
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
3329 MILLERSTOWN ROAD SHIPPENVILLE PA 16254 USA	814 782-3456	814 782-6468
	7. PVPO NUMBER 200500263	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** ☒ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** ☒ **YES** ☐ **NO**

10. Is the applicant the original owner? ☐ **YES** ☒ **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☒ **YES** ☐ **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☒ **YES** ☐ **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

Nibor Seed Co., Rt 4 Box 70A, Okemah, OK. 74859 was the original breeder + sole owner. All rights to Dewald eastern gamagrass has been sold to Walt Robertson of Shippenville, PA.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
WALTER W. ROBERTSON	3329 MILLERSTOWN ROAD SHIPPENVILLE PA 16254	VARIETY NAME DEWALD
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	FOR OFFICIAL USE ONLY PVPO NUMBER #200500263

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Signature

4-30-2007
Date